Laboratory, Los Alamos National Laboratory, and Oak Ridge National Laboratory. Through these pilot centers, which facilitate collaborations with industry, magnet researchers are applying expertise from what has come to be known as "low-temperature superconductivity" to the development of HTSC materials. Many of these researchers have a background in fusion magnetics.

The successful operation of the pilot centers provided the model for a new mechanism for technology transfer, the cooperative R&D agree ment (CRADA). Both large companies (e.g., Corning, DuPont, General Electric, IBM, and Westing house) and small companies (e.g., American Magnetics, American Superconductor; HiTc Superconco, and Superconductivity, Inc.) are involved in CRADAs covering a range of superconductor applications. Many of these partici pants also have "roots" in the fusion program.

Today, applications of super conductivity are being pursued well beyond the fusion program. Super conducting magnets are being evaluated for magnetically levitated (maglev) trains and for advanced propulsion systems with aerospace applications. Energy storage systems are being developed from low-temperature metallic supercon ductors that have long been part of the fusion program and from the new HTSC ceramic oxides. A highly efficient motor, pictured below, has been demonstrated with low-temperature superconductor and is ready to be adapted to HTSC materials. Because 64% of the elec tricity generated today is consumed by large electric motors, this motor could save billions of dollars per year. Frictionless magnetic bearings, magnetic refrigerators, more effi cient medical diagnostic and process control systems, and low-loss power transmission cables are among the other applications under development.